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AMIGA A1200

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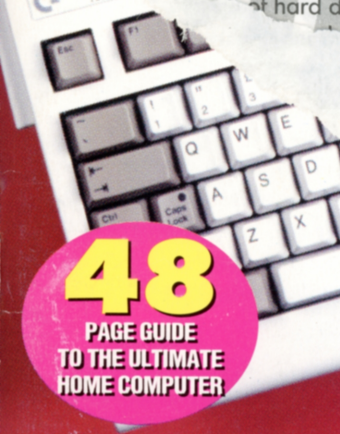

48 PAGE GUIDE TO THE ULTIMATE HOME COMPUTER

dream machine

YOUR GUIDE TO THE A1200

EVERYTHING YOU NEED TO KNOW ABOUT THE A1200

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THE DREAM MACHINE

When the A1200 was released in November 1992, it met with mixed, but generally positive reactions. Now six months later it's time to see how it's performed and if it has really turned out to be the dream machine that everybody hoped it would be.

A number of new features distinguish the A1200 from earlier Amigas. The most important of these is undoubtedly its AGA chip set. AGA stands for Advanced Graphics Architecture and it finally allows the Amiga to start making an impact on the ever-growing PC market. When the Amiga first appeared eight years ago, its HAM mode graphics wowed everyone who saw them. Since then, computers such as the PC with its 256-colour Super VGA mode have gradually made the Amiga look less and less impressive.

Thanks to the AGA chips the Amiga can now produce screens which use up to 256,000 colours, selected from a palette of over 16 million. Better yet, the AGA chips also provide several new screen modes which permit display at much higher resolutions than was previously possible (up to 1280x512 pixels without resorting to overscan).

Another major improvement on the graphics front is the inclusion of a new display enhancer which at last rectifies that annoying flicker that was so apparent when using hi-res and interlace modes on the old Amigas.

The only down-side to this is that you'll still need a multi-sync monitor in order to appreciate the new screen stability. Alternatively, you could simply buy a VGA monitor for hi-res work and an ordinary monitor for the rest!

Of course, the new graphics modes are not without their cost. In the first place, screens are much larger, so the computer

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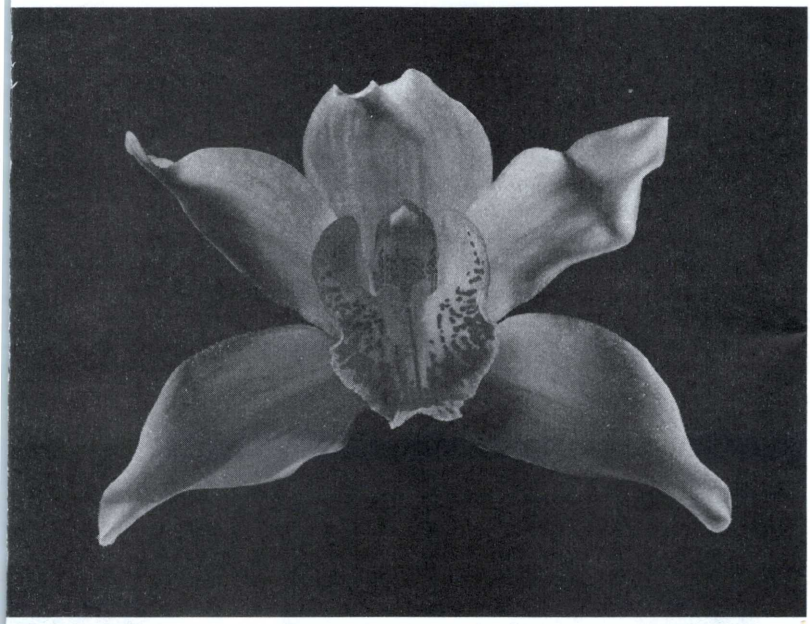
requires more memory to store them in. This leads to perhaps one of the most important features of the 1200's design; its 68EC020 processor. This processor runs at nearly twice the speed of the 68000 processor found inside the old Amigas. In real terms, the speed increase is even greater thanks to the A1200's 32-bit internal architecture and RAM. Compared to the 16-bit design of older Amigas, this now means that information can be moved around in chunks which are twice as large as before.

Incidentally, the EC in the new processor's name means that you can add a maths co-processor at a later date if you require one. Maths co-processors such as the 68881 and the 68882 can be used to greatly increase the speed at which maths-intensive operations (such as ray tracing, fractal generation and spreadsheet manipulation) are performed.

EPIC PROPORTIONS

Due to the Amiga's popularity, epic games such as *Monkey Island 2* are becoming ever more commonplace. It's difficult to remember a time when the majority of games ran in only half a megabyte of memory. However as games continue to become more complex, it looks



as if even one meg isn't going to be enough before much longer. It's fortunate then that Commodore had the wisdom to include two megs as standard with the A1200. Better yet, they've provided a range of expansion routes so that your computer can grow with you.

For starters, there's the PCMCIA slot. This handy interface first made an appearance on the A600, and it allows you to connect any of a wide range of peripherals in the form of credit card sized 'smart cards'. At present, there are cards available which will let you add up to eight megs of 16-bit memory in this way. However, despite its promise, we have yet to see any of the other PCMCIA peripherals that were talked about when the machine was released. So far not

one single game has been published on smart card, nor have we seen PCMCIA hard drives or modems, despite the fact that such peripherals already exist on smart cards for PC owners. As with all new technology, the software companies need to be sure that there's a large enough user base before committing valuable resources to new publishing mediums – especially when the existing options are adequate, if not particularly pirate proof!

EXPANDING

Beneath the A1200 there's a CPU/RAM slot hidden inside a trapdoor. This port allows you to plug in 32-bit RAM expansions and faster processors and maths co-processor boards. This port is already being well exploited by the likes of GVP who have released a combined 32 meg RAM expansion and 68EC030 accelerator, and an eight meg RAM/SCSI interface combo as well. A number of other third party developers have also released expansions for this slot. With this level of hardware development already, the machine's future seems assured, much to the chagrin of those doom mongers who claimed that the Amiga was a dying machine.

The basic A1200 comes with a single low-density three and a half inch floppy drive. The much talked about high-density drives (which are standard on A4000s) still have not been added to the 1200, which means that we're stuck with disks that have a maximum uncompressed data capacity of 901k.

To make matters worse for people who are upgrading from an older Amiga, certain external drives won't work at all with the 1200. The reason is that the old Amigas used to provide both 12 and 5 volt lines to the drive port, but Commodore say that new drives are so power efficient that the 12 volt line is no longer needed. Tough luck if you have a drive or other peripheral (such as a digitiser) which used the 12 volt line.

As with the A600, you can buy a version of the A1200 with a hard drive already fitted and formatted ready to go. Diamond Computers are one of the first to sell 1200s with hard drives prefitted and they provide two configurations: 80Mb and 130Mb. The 80Mb version costs £549, whilst the 130Mb version is

£725. If you can afford it, it's worth spending the extra money and getting the 130Mb version.

As the A1200 comes with an IDE interface as standard, it comes as no surprise to learn that the HD version uses two and a half inch IDE drives. The inclusion of the simpler and cheaper IDE interface as opposed to a SCSI or even SCSI 2 caused some anger among industry experts when the A1200 was first released. The trouble is, IDE interfaces place some restrictions upon the drive that you can attach to them.

PROBLEMS

Although annoyance at Commodore's apparently short-sighted cost cutting exercise has not abated, the appearance of GVP's SCSI 2 interface and RAM card has at least fulfilled the need for flexible hard drive interfacing.

However, that seems to pose yet another problem, namely the fact that the A1200 uses surface mount technology for the construction of its circuit board. This means that all chips and components are permanently welded onto the circuit board rather than simply socketed, as with the old A500s, so that the machine can only be upgraded via the authorised expansion paths (the PCMCIA slot, the IDE interface and the trapdoor expansion). At first this may not seem to be much of a problem, but at present there's no way to add both a faster processor and a SCSI interface. It's either one or the other. It

seems that Commodore are trying to push serious users who want to expand into buying one of the more expensive A4000 computers from the word go.

Not all of the new features of the 1200 are visible to the ordinary user. In fact there are some features which will only be apparent to programmers (although the end user will also benefit). The AGA chip set that I mentioned earlier in this article can do more than simply put lots of high resolution colours on the screen. For starters, hardware sprites have been improved so that they can be used at any resolution on any screen and at a maximum width of 64 pixels. This means that it will be easier to create large, highly detailed sprites for use in games such as *Street Fighter 2* and *Body Blows*. Because the new options are hardware based, it means that it's easier than ever for programmers to move large-scale graphics around the screen at high speed. The Amiga's playfield routines have also been enhanced to give two playfields each with a maximum of 16 colours. It's these multiple playfields which allow the consoles to produce impressive parallax background scrolling, so it's nice to see that Commodore are finally taking the console threat seriously too.

The A1200 is also supplied with AmigaDOS 3.0 which comprises both a new Workbench and Kickstart ROMs. We'll be looking at Workbench 3.0 in detail later.

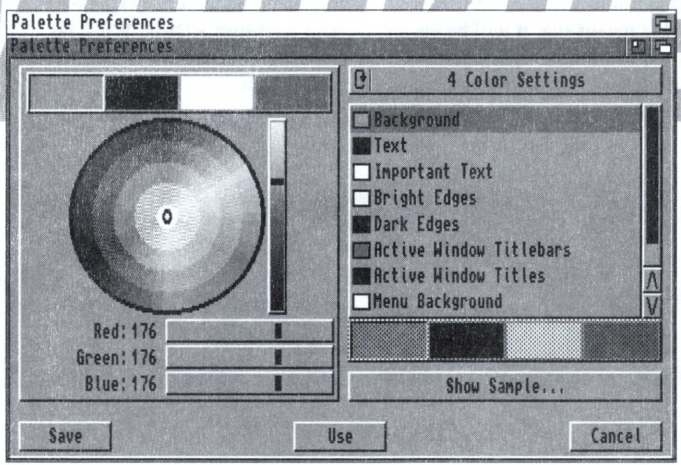
UCTION

WORKBENCH 3.0

Considering the fact that a large percentage of users have as little to do with Workbench as possible, it's strange how much excitement a new version seems to generate.

With the release of Workbench 3.0, the usual enthusiasm has abounded, but for pre-1200 owners, it's wasted effort because most of the new features are only of any use if you own an AGA-based Amiga.

The first major difference is in the way that the Workbench is organised. Previously all of the main Workbench programs and utilities were on a single disk, with a few support files and rarely used programs on the extras disk. Now, the Workbench is scattered across five disks, with a sixth disk for hard drive instal-



AMIGA FORMAT

lation if you own a HD version.

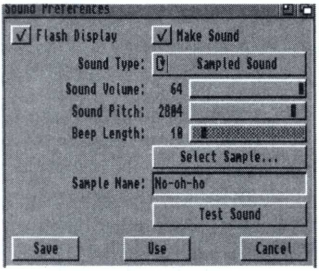
The new Workbench can be compared to the hub of a wheel with spokes leading off to ancillary programs on other disks. I found this new approach a little disconcerting at first, but you soon realise that it's much more logical. Under the old system, the Workbench disk was all but creaking under the strain of the huge number of bits and bobs that were crammed onto it. Now, the Workbench disk is much cleaner, containing only essential data and programs.

MORE CHOICE

Bearing in mind the 1200's new screen modes, it's inevitable that the screen preferences have been upgraded. The Workbench colours can be selected from a 24-bit palette of 16.8 million colours. As well as being able to create patterns for use in windows or backgrounds, you can opt to load a screen as a background instead.

The sound editor is another of the 'mostly aesthetic' changes. This one allows you to determine how the computer will alert you to errors or other prompts. You can tell the computer to flash the screen, make a sound or do both.

The fun part is that sounds are not just restricted to boring beeps (although you can opt for those if you prefer). Alternatively you can give your Amiga a little personality and choose a sampled sound for it to play. Imagine

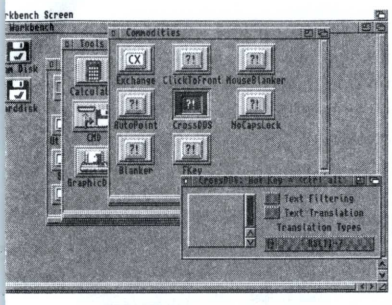


your every mistake being chided with 'Hey sucka!' or some similar sampled soliloquy!

PRODUCTIVITY

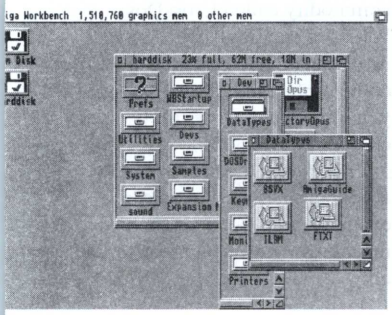
One of the more productive aspects of the Workbench is a commodity called CrossDos. With this running, any floppy drive can be designated as a PC-compatible unit, thus enabling you to read and write to PC disks on your Amiga.

This means that if you use PCs at school or at work, you can exchange files between the two machines with very little effort at all.



The new Workbench also supports a handy feature known as Data Types. Whenever you install a program that uses Data Types, you can also install a Data Type library to the Devs/Data Types drawer of your Workbench disk or hard drive.

Other applications that support the Data Types format will instantly 'recognise' and be able to use any sort of data for which an appropriate Data Type library exists.



There are four Data Type libraries supplied with the Workbench: 8SVX which is used to read sampled sounds, ILBM which is for IFF screens, Amiga Guide for displaying AmigaGuide help files and FTXT for displaying IFF text files. The 8SVX library is already used by the new Sound Editor, and the ILBM library is used by a nifty program called Multiview.

MIND YOUR LANGUAGE

Recognising the Amiga's burgeoning international market, Commodore have added a new preferences tool called Locale. This allows you to specify your country, time zone and preferred language.

Once you've done this, all system text (such as menu titles, system messages, etc), numbers, dates and times will be presented to you in your chosen language, and in the case of the latter three, in the format appropriate to that country.

Whilst this will not necessarily make a great deal of difference to English or American users, it does mean that at last our European cousins are being catered for too.

WORKBENCH HINTS

This section is aimed at those of you who are either very new to the Amiga, or who have never got round to reading the Workbench manual. It will hopefully provide you with the kind of vital information that you will eventually need to learn to get the most out of Workbench.

Multiview resides in the Utilities drawer and it allows you to view IFF images. It also lets you print them without having to load an art package such as *DPaint*.

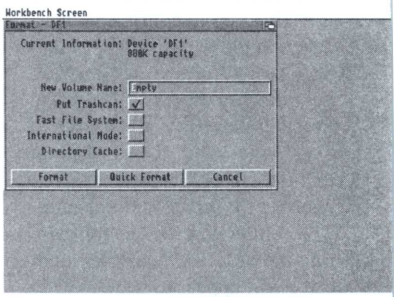
FORMATTING A DISK

If you want to save information (such as a *Deluxe Paint* picture or a word processor file) onto a blank disk, the disk will first have to be prepared. This is easy to do, just follow these simple instructions:

1. Load your Workbench. If you're using a floppy disk, simply insert the Workbench disk and turn the computer on. If you're using a hard drive, just turn the computer on.

2. Insert the disk to be copied in the internal disk drive.

3. Select the disk's icon by clicking on it once with the left mouse button. If the disk has never been formatted before its icon will be called DF0:NDOS. If it has been previously formatted it will be called DF0: and then whatever name it was previously given.



4. Hold the right mouse button down and then move the arrow pointer to the Icons menu that appears at the top of the screen. When you get there, a list of options will appear. Still holding the right button down, you should now slide down the list of options until you reach the words 'Format Disk', then release the mouse button.

5. The formatting requestor will appear and you'll see a small text gadget labelled 'New Volume Name'. Press the DEL key until the word Empty has been erased, then type in whatever name you want to give your blank disk. For now, it's best not to use any spaces in the name.

6. Click the 'Format' button and another requestor will replace the first one. This time the requestor is asking you to confirm your decision to format a disk. This is because the formatting process permanently erases any information that may have previously been on the disk. If you're certain that it's OK to format the disk, click the 'Format' button again. The computer will start formatting the disk, and a progress indicator will appear to show how much of the disk has been formatted.

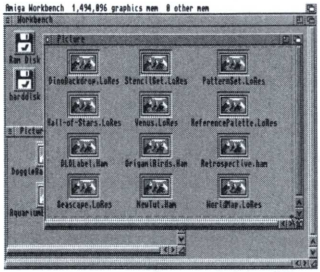
LOOKING AT FILES WHICH ARE 'INVISIBLE'

Icons are the small pictures you see on your Workbench screen, and each one of them represents a file. Although you can see lots of files, there are many more which are 'invisible'. This is because they don't generally need to be touched by the ordinary user, and they often serve no purpose except as data for other programs to use.

However, there may be times when you will want to see all files in a drawer, not just the ones represented by icons. To see them, all you need to do is click on the required window with the left mouse button (it'll turn blue around the outside), then use the right mouse button to select 'Show' from the 'Window' menu. As you select this option, a further pair of options will appear beside it. Keeping the right button held down, simply move the pointer across until the words 'All Files' are highlighted, then release the mouse button. The computer will examine the contents of the selected drawer for a while and will then display every single file.

SELECTING MORE THAN ONE ICON AT A TIME

There are occasions when you may wish to select more than one icon at a time, for instance if you want to move some files around. There are two ways to do this: the first is called extended selection.



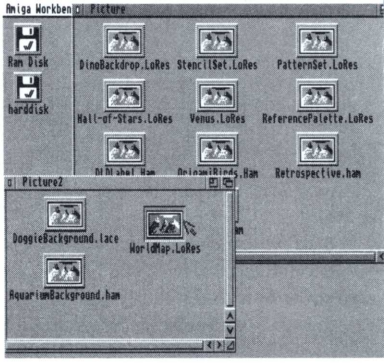
All you have to do is click on the first icon that you wish to select, then press and hold the Caps Shift key whilst you select any other icons to be included. As you click each icon, the previous ones remain selected.

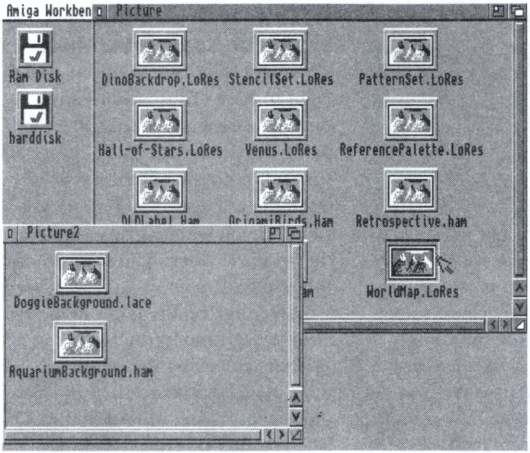
The other way of selecting multiple icons is known as drag selection. To do this, imagine a rectangular box surrounding the icons you want to select. Move the cursor to any corner of the box without actually touching any of the icons. Now click the left mouse button and keeping it pressed, move the cursor to the opposite corner of the rectangle. As you move the cursor, you'll notice a rectangle following your movements. This is known as a marquee. When you reach the opposite corner of the rectangle, release the mouse button and all icons that are touching any part of the marquee will be selected.

MOVING A FILE USING THE MOUSE

There are times when you'll want to move files around on a disk. This is easy to do, and using the mouse it can be performed in no time at all. First open the window containing the file that you want to move and the window where you want to move it to.

Now click on the file's icon with the left mouse button. Without releasing the button, drag the file to its destination then let go of the mouse button. The file will be erased from its previous location and transferred to its new one. If you want to drag multiple files in one go, follow the instructions given above for making a multiple selection.





on a disk other than the one the program was loaded from. Why? The most important reason is that you should never save information onto your original program disks. They've doubtless cost you money, and you risk permanently damaging your programs if something should go wrong whilst saving. Of course, the other reason is that sooner or later, the original disks would run out of room.

No matter what program you're using (except games and demos), the one thing that they all have in common is a file requestor. This is the section of the program where you load and save programs from. The actual content and appearance of file requesters varies greatly from program to program, but they will all contain at least three essential elements.

Press the Caps Shift key (if it isn't already pressed) and keeping it held down, drag the files to their new location as usual.

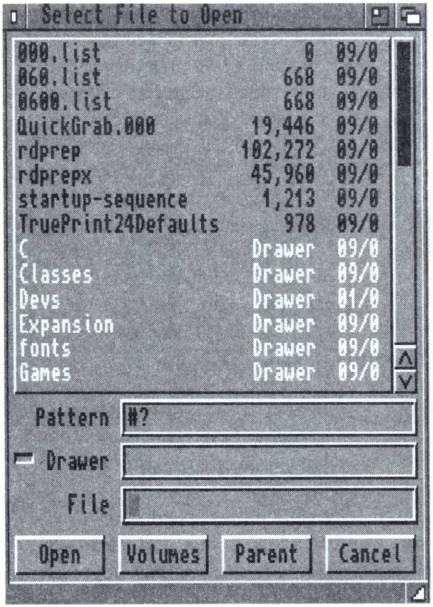
SAVING FILES TO YOUR OWN SAVES DISK

Chances are you will eventually use a package from which you need to save some data. This could be an art package, word processor, a music package or any one of hundreds of other programs. Whether you own a single disk drive, or you're fortunate enough to own two, you need to know how to tell the computer that you want to store information

WORKABLE

The first of these is a window where the contents of the current disk or drawer can be listed. The second is a text gadget usually labelled 'File' and this is where you must specify the unique name under which you want your file to be saved. The third element of the file requestor is usually labelled 'Drawer' or 'Dir' and it's the part we're most interested in because it allows you to specify the directory path which indicates exactly where a file should be stored.

Usually when you access a program's file requestor, the directory path defaults to the place that the program was originally loaded from. Whenever you select Load or Save, the file requestor will open and the computer will start reading the contents of the default directory. Not to worry, as soon as the disk activity light goes out, insert your saves disk in the internal drive and delete whatever is written in the 'Dir' or 'Drawer' text gadget. Now type DF0: in its place and press return. The computer will examine the contents of your saves disk and a contents list will be displayed in the window. Now all you need to do is type a name into the 'File' text gadget and press return again. Most file requestors will have a button labelled 'Save' or something similar, click that and your file will be stored on the new disk.



EXPANSIONS

It's all very well owning this state-of-the-art piece of kit, but what if you want to take it a little bit further? What expansions are available to you?

IDE DRIVES

The A1200 comes with an IDE interface installed as standard. It's much simpler than a SCSI because most of the controlling electronics is on the hard drive itself. This is a bit of a double-edged sword because a hard drive interface, be it IDE or SCSI, could easily cost you £100 or more to add yourself. Using the one that's included, all you need is any IDE drive and a suitable connecting cable and you're ready to go.

Many people would claim that there's a disadvantage to this though, in that the IDE interface places severe restrictions upon the type of drive you can connect. Worse still, IDE drives are slower than SCSI ones. Depending on who you listen to, the maximum size of IDE drive that you can connect to Commodore's interface is either 170 or 240Mb (which is large enough for most 'average' users in any case). Even this figure doesn't seem to be entirely true. Apparently the restriction is imposed because the two and a half inch drives only come in that capacity or less. However, Software Demon are fitting three and a half inch IDE drives into A1200s; this means that you can use drives with a capacity of 400Mb or more.

As to the speed restrictions, well it's true that IDE drives transfer data about 20 per cent slower than SCSI drives, but does it really matter?

I think that the greatest advantage in a hard drive is not its great speed, but the fact that you don't have to keep swapping disks all the time!

Of course, speed is definitely an added bonus, and if hard drives were slower than floppies,

then perhaps people would seek alternative storage solutions.

The only genuine complaint is that IDE drives do not permit daisy chaining, either of additional drives or peripherals. SCSI, on the other hand, lets you connect up to eight SCSI devices in serial. These can be hard drives, optical drives, floptical drives or tape streamers.

Naturally this provides a SCSI equipped machine with far greater expansion facilities than a similar machine equipped solely with IDE.

CONSIDERATIONS

You should consider carefully whether or not you'll be expanding your set-up further as time goes on. If the answer is no, then there's absolutely no reason why you shouldn't stick with an IDE drive. If the answer's yes, then perhaps you should consider buying GVP's SCSI/RAM card reviewed later on in this guide.

If you decide to go for an IDE drive, then there are further choices to be made. Firstly, what capacity do you require? One of the most common mistakes is to buy a drive that's too small for your requirements. You can't think of enough stuff to fill an 80Mb drive, so you buy a 40Mb unit. It's only then that you remember that *Monkey Island 2* comes on 11 disks, and occupies more than 10Mb.

Don't underestimate your needs. When you've decided what size you're going to go for, you also have to think about whether or not you want to try and fit the drive yourself. This isn't particularly difficult, but you should remember that fitting a drive yourself invalidates the warranty.

SUPPLIERS

Having decided which drive you want, there are plenty of companies who supply hard drives. For my money, Gordon Harwood Computers offer the most courteous and efficient installation service. With 40Mb drives costing £199.95 and 80Mb versions costing £299.95 they're by no means the cheapest, but their after-sales service is second to none. Phone them on 0773 836781. If you're looking for a cheaper service, contact Trilogic on 0274 691115.

When it comes to buying bare drives and doing the job yourself, First Computer Centre offer a wide selection of drives at prices ranging from £164.99 for

SAMPLE

a 40Mb unit up to £299.99 for a 120Mb drive. Contact them on 0532 319444.

Those of you who do fit the drives yourself may be interested to know that Trilogic offer a unique insurance service to replace the Commodore warranty that you'll lose.

The insurance will last for between two and three years depending on the premium paid. The policy covers most eventualities except theft and wilful or cosmetic damage. Phone Trilogic on 0274 691115 for a quote.

SOFTWARE

Incidentally, when you buy your drive, you should ensure that software is provided to enable you to prep and format the unit. If you have the drive professionally fitted, you should find that this task has already been performed for you.

If your drive supplier doesn't have the appropriate software, you can obtain a copy of RDPrep from most PD libraries.

If you want to buy a machine with the drive installed, the only people that can do the job and retain the Wang warranty are Indi Direct. Call them on 0543 419999.

RAMCARDS/ ACCELERATORS/ MATHS CO-PROS

A1230 TURBO GVP

Based on the 68EC030 design that GVP first built into their A530 Turbo hard drive for the A500, the A1230 brings '030 processing power to your A1200. The accelerator comes on a card which plugs into the trapdoor expansion underneath the machine. The accelerator runs at 40MHz as opposed to the 14.6MHz speed of the un-accelerated A1200. This means that your A1200 will run at speeds close to, if not exceeding, that of an A3000.

The card also has space on-board for a 40MHz 68881 or 68882 maths co-processor for speeding up things such as landscape generation, sound sample processing and vector calculation (as used in many 3D flight sims and driving games).

As with all GVP expansions, you can also add memory to the card, and this comes in the form of 32-bit SIMMs. It's supplied with 1Mb of RAM as standard but you can upgrade that to a massive 32Mb using two 16Mb

SIMMs. Be warned however, these SIMMs cost about £600 each!

Available from: Silica Systems, 1-4 The Mews, Hatherley Road, Sidcup, Kent, DA14 4DS. Tel: 081 309 1111.

MX1200 MICROBOTICS

Unlike GVP's A1230, the MX1200 doesn't improve upon or replace the existing 68020 central processing unit; it simply adds a maths co-processor and an upgradable RAM card. For those people who have lots of maths-intensive work to do, but who can't afford a full CPU upgrade, this is a very good alternative.

It comes in a number of configurations, featuring either a 68881 or 68882 co-pro. These may be of the 25 or 50MHz variety. Once plugged in, the A1200 automatically detects its presence and reacts accordingly. Unfortunately the same can't be said for the RAM which you can add to the card. The card has a single SIMM slot into which you can plug a 32-bit SIMM up to 8Mb in capacity.

In my opinion the provision of a single slot is an ill-considered cost-cutting exercise because you can't upgrade gradually, in 1Mb or 4Mb blocks for instance. If you're to avoid trashing a 1Mb or 4Mb SIMM (or both) as you outgrow them, you'll have to decide what size of memory you require right from the word go.

If you upgrade to a full 8Mb, it also causes conflicts with the PCMCIA slot, which needs to be disabled. I'm not sure if this is a feature of the expansion or of the PCMCIA slot, but whichever it is, I don't like it one little bit, and it could cause problems if software ever starts to appear on smart cards.

Available from: First Computer Centre, Dept. CU, Unit 3, Armley Park Court, Off Cecil Street, Stanningley Road, Leeds, LS12 2AE. Tel: 0532 319444.

PC1204 POWER COMPUTING

Power's entry into the field of A1200 peripherals comes in the form of a four meg memory card which has space on it for a maths co-pro. The memory chips are soldered onto the card, which can't be upgraded, and Power tell me that the reason for this is that any further upgrades would

interfere with the PCMCIA slot.

The card is able to accept math co-pros rated at 25, 33, 40 or 50MHz. Prices range between a very reasonable £185.95 for the 4Mb card with no FPU, up to £333.95 for a 4Mb card with a 50MHz FPU on-board.

As usual, the card fits into the trapdoor expansion slot.

Available from; Power Computing Ltd, Unit 8, Railton Road, Woburn Road Industrial Estate, Kempston, Bedford, MK42 7PN. Tel: 0234 843388.

BLIZZARD MEMORY BOARD PHASE 5

Amiga newcomers Phase 5 Digital Products have released their own board, which is being pitched primarily as a RAM upgrade. The board plugs into the trapdoor expansion and comes pre-fitted with 4Mb of 32-bit RAM. This can be further upgraded to 8Mb using the company's proprietary ADD4 memory module.

By using a non-standard upgrade, the company has the opportunity in the future to ask whatever price they like from existing owners, and for this reason I would prefer a board which can be upgraded using standard SIMMs.

The board also has space for a 68881 maths co-pro, and although no speed rating is given, I assume that this refers to a 14.6MHz unit. The board costs £249 and the upgrade card is a further £199.

Available from: New Horizon Computers Ltd, High Hope, Lea, Ross-on-Wye, Herefordshire, HR9 7LN. Tel: 0989 750260.

MISCELLANEOUS 1200 SCSI-RAM CARD GVP

If you're not satisfied with the IDE interface provided in your A1200, you can now fit a SCSI interface care of GVP. The board plugs into the trapdoor expansion and provides you with a SCSI 2 interface.

The board also features an FPU slot into which you can slot a 68881 or 68882 maths co-processor to give additional zip to your Amiga's maths operations. Yet again, you can also add up to eight megs of 32-bit SIMMs to the board.

Available from: Silica Systems, 1-4 The Mews, Hatherley Road, Sidcup, Kent, DA14 4DS. Tel: 081 309 1111.

A1200 REAL TIME CLOCK
PRIMA TECHNOLOGIES

For some obscure reason, Commodore decided not to include a battery-backed clock with the A1200, despite the fact that they'd already included one in earlier A500+ Amigas. Whatever their reasoning, this leaves an opening for third party hardware suppliers, and it seems that Prima Technologies are first in to fill the gap.

Costing £15, their battery-backed clock fits internally (although it's not yet certain whether or not this invalidates your warranty).

Available from: First Computer Centre, Dept.CU, Unit 3, Armley Park Court, Off Cecil Street, Stanningley Road, Leeds, LS12 2AE. Tel: 0532 319444.

MONITORS

As fabulous as the A1200 may be, all this new graphics power tends to highlight the need for a decent monitor. Once it was enough just to own a monitor, now you need something which is capable of multi-sync display if you're to enjoy all of the Amiga's display modes. The good news is that multi-sync monitors have fallen in price drastically over the last few years, so that one which would have cost £600 or more only three years ago can now be purchased for as little as £250-300.

The standard display mode (Workbench and the like) requires a monitor with a horizontal scan rate of 15KHz, whereas the higher resolutions require a rate of 31.5KHz. If you've upgraded from an old Amiga and already have a video monitor such as the Commodore 1084s or the Phillips CM8833 (which scans at 15KHz), you may prefer to buy a VGA monitor to use in addition to your existing monitor.

Equally, if you only ever use utilities that run via Workbench, you may be able to get away with a VGA monitor all the time thanks to a feature called Mode Promotion in which the Amiga attempts to 'promote' the 15kHz modes up to the appropriate rate for your monitor. Unfortunately this doesn't work for software that doesn't use the Workbench, so a VGA monitor will be useless for most games.

If you're buying a monitor for the first time, and your wallet

can stretch to it, you really should treat yourself to a multi-sync. There are only a few multi-sync models available which sync at the required rates.

New Horizon Computers have just launched three new multi-sync monitors with 15, 17 and 20-inch screens respectively. They have a dot pitch of 0.28mm so the display will be really sharp in even the highest resolutions. Each one comes complete with all cables and software drivers and New Horizon are even chucking in a tilt 'n' swivel monitor stand with each one. The prices are £385, £575 and £1130.

Contact: New Horizon Computers Ltd, High Hope, Lea, Ross-on-Wye, Herefordshire, HR9 7LN. Tel: 0989 750260. Commodore's own 14-inch 1960 monitor also has a dot pitch of .28mm and costs £399.95. Contact Silica Systems, 1-4 The Mews, Hatherley Road, Sidcup, Kent, DA14 4DS. Tel: 081 309 1111.

EXPAN

A1200 SOFTWARE

Although the software publishers generally expressed their enthusiastic support for the A1200, all the enthusiasm in the world counts for nothing if they don't support the machine.

Initially, those A1200 programs that did appear were primarily re-writes of existing titles. Most of these weren't designed to take advantage of the 1200's new features, they were rewritten just so that they would work. Even now, there are only a handful of programs which can be said to use the new machine's graphics or processing power to any significant degree. Let's start by looking at some existing programs that benefit from the A1200's new architecture.

GAMES

AV8B HARRIER ATTACK

This is a classic example of a game which is much improved on an A1200. Basically it's a flight sim in which you take the role of combat pilot stationed at the edge of an Indonesian combat zone. Your missions vary from mundane air patrols to specific strikes deep within enemy territory.

The game is imaginatively linked by a series of briefing and tactical sessions on board the aircraft carrier where you receive your initial missions. Furthermore, rather than simply having to fly the harrier (a formidable enough task in itself), you also have to co-ordinate ground forces as well as positioning helicopter support.

So far, not a great deal that merits the use of a 1200 you might think, until you realise that the flight sequences are entirely vector based. That means that representations of the terrain and objects on it are created by drawing a series of polygons. Although these give a less

detailed appearance than traditional bit-mapped graphics would, they ultimately permit more realism because an entire vector world can be held in memory. The pilot can then move through this world in a full three dimensions.

Anyway, moving around in a vector-based landscape requires huge numbers of calculations, and by using the A1200's faster 14MHz processor, these calculations can be performed much faster, leading to smoother and more convincing animation.

Contact: Domark, Ferry House, 51-57 Lacy Road, Putney, London SW15 1PR. Tel: 081 780 2222. Price: £39.99.

BATTLE ISLE

This time it's not the animation which is improved by the A1200, but the computer's gameplay. This superb strategy game from Ubisoft pits you against another player, human or electronic, in a futuristic battle simulation.

You play the role of a commander and it's your task to direct the movements of your battlefield forces. There are 20 levels and in the early ones the number and diversity of your troops is quite limited, as are the size of the landscapes you'll be fighting on. As the game progresses, all elements of the game become progressively larger and more complex, requiring longer and longer to work out your turns.

Your opponent will also be working out his moves whilst your brain is feverishly ticking away. This can be a real drag, especially when your opponent is the computer. The trouble is, whilst you're working out your movements, the opposition is working out his attacks, and vice versa. Because the attack phase is easier to work out, it's much shorter. In later levels, this can mean that in your attack phase, you must sit around and wait for five minutes or more whilst the computer works out what it wants to do.

Enter the A1200 stage left! Thanks to the 68020 processor, the computer now 'thinks' at least twice as fast. *Battle Isle* was a good strategy game, and now it's even better!

Contact: Ubi Soft, 707 High Road, North Finchley, London N12 0BT. Tel: 081 343 9055. Price: £30.99.

ZOOL 1200

One of the most popular games of last year, *Zool* combined eye-

catching graphics with excellent playability in a game hailed as the Amiga's 'Sonic beater'.

One of the major selling points of the original was its scrolling speed, and it would have been reasonable to expect that with the faster 68020 chip at the heart of the A1200 this would be even more gob-smacking; strangely, however, this is not the case. In some parts in fact, the game seems almost, well, sluggish.

The game is set in six different worlds, each consisting of three levels. The scenery in each one obviously reflects its theme, and the obstacles and enemies feature such terrors as killer bees, lethal bananas, lollies and Meccano pieces. Our hero, Zool, Ninja of the Nth dimension, has a wide selection of moves, jumping, climbing, whirling and slashing for all he's worth.

The enhancements made for the A1200, whilst initially striking, are soon proved to be only a cosmetic exercise; yes, the backdrops are more colourful, yes, there's now parallax scrolling, and yes, there's a lot more sound to make use of the improved sample handling abilities of the new machine. But whether these can truly be said to improve the game is, of course, a matter of taste; personally I sometimes found the display rather chaotic and confusing. You'll need all your concentration to actually FIND Zool on the screen at times! That said, this is still mighty impressive, equal to any console game, and a damned sight better than most.

Contact: Gremlin Graphics, 2-4 Carver Street, Sheffield, S1 4FS. Tel: 0742 753423. Price: £25.99.

SLEEPWALKER 1200

Unless, for some reason best known to yourself, you actually like sitting in a bath of cold custard, the most fun you could have while raising money for Comic Relief this year was by playing *Sleepwalker*.

Sleepwalker is a platform game where you, as Ralph the faithful hound, try to stop your young sleepwalking master, Lee, from stumbling into various sticky situations; often by jumping in and taking the flak yourself. What dedication, eh? Personally I'd prefer a nice warm fire and a Bonio. Still, you are indestructible, which helps!

Now that a version specially

enhanced for the A1200 has been released, how has it been improved? Well, to be honest the changes aren't glaringly obvious. Lee now ambles round in a town which contains eight more colours, that's all. Oh yes, and there are a few extra sounds... Mustn't forget that the intro sequences are now in 256 colours and not just 32; hmm, that sounds impressive, but the difference isn't actually that astounding, and of course is completely irrelevant as far as gameplay is concerned.

Before you put pen to paper (or indeed fingers to word processor) to defend this excellent game, let me assure you that my comments are not intended to dissuade you from buying it. In fact, the playability and humour, in both visual and sound departments, make it an almost essential buy; I had hoped for more from the enhanced version though. Spoilt, that's me.

Contact: Ocean Software, 2 Castle Street, Castlefield, Manchester M3 4LZ. Tel: 061 832 6633. Price: £34.99.

ISHAR 1200

A1200 owning RPG fans may have been disappointed to find that *Ishar – Legend of the Fortress* from Silmarils was incompatible with their machines. This has been rectified, and a fully working and significantly enhanced version is available.

Running in first person perspective, *Ishar* is slightly unusual because there's none of the character generation often encountered in this type of game; you start with a fighter, and recruitment of other party members is done along the way. Existing members decide amongst themselves whether they want a newcomer to join the posse, and this can sometimes work against you as you find yourself unable to recruit a character you feel would be useful.

A huge world exists for you to explore, and your sense of direction will be tested to its limits as you struggle not to get lost. Many characters can be found for you to interact with, gleaning information to help you defeat the villain, Krogh, who has built a temple in your homeland Kendoria and is terrorising the entire neighbourhood.

When you are joined by a cleric or a wizard, you become able to use spells, which will increase in effectiveness as you gain experience. You're able to mix your

own potions from ingredients that can be bought on your travels, either following specific recipes gained from others, or if you like surprises, haphazardly throwing things together!

The graphics were good before, and now in 256 colours they're superlative, giving the landscape a sense of depth that greatly enhances the atmosphere. The gameplay has also been tweaked to take advantage of the 1200's faster processor, so movement (which was previously a tad sluggish) is quite acceptable now. A melancholy tune accompanies your wanderings, although this can be switched off. Despite all of these laudable improvements, there still seems to be rather too much landscape and not enough locations of interest. But I guess if you're a mapping fanatic this will be a dream come true!

Contact: Daze Marketing, 2 Canfield Place, London NW6 3BT. Tel: 071 328 2762. Price: £32.99.

TRANSARCTICA 1200

Train-spotters of the world unite; the A1200 version of *Transarctica* is now available, based around an even more impressive locomotive than the Orient Express. Glitches on the previous release meant that it was incompatible with the A1200, but now all that is a thing of the past, and you can freeze to your heart's content.

Set in a man-made ice age, under impenetrable clouds, you are the captain of a massive train ploughing its way through the frozen wastes of the European/Asian continent, trading goods, mining the coal necessary for your journey and battling against the Viking Union. You are on a quest for a way to reverse the damage done to the environment which caused the bleakness of the landscape you see before you.

Your train's crew are a pretty dumb lot and have to be supervised closely so they don't do something really stupid like actually blow the train up by shovelling coal too enthusiastically; sadly, you seem to be the only person blessed with an ounce of intelligence, so you have to make all the decisions.

Transarctica is likely to appeal mostly to hard-line strategy fans. The going can be slow, and often your journey can seem rather aimless. However, the

game benefits from a wonderfully atmospheric soundtrack and some magnificent static screens. It is supposedly hard disk installable, but working from the instructions in the manual I couldn't get the game to do anything.

As with *Ishar*, the primary improvements are graphical, although without running the two versions side by side, the 256 colour graphics don't exactly leap out of the screen at you. Nevertheless, an intriguing and absorbing game that should keep strategy fans engrossed for many an hour.

Contact: Daze Marketing, 2 Canfield Place, London NW6 3BT. Tel: 071 328 2762. Price: £32.99.

CIVILIZATION 1200

Many of you will be familiar with Sid Meier's epic game, *Civilization*. Released last year by Microprose, it's a huge and engrossing game of the god sim genre, in which you take control of the progress of civilisation on your planet, starting with a group of settlers and gradually, through the ages, building a society as similar, or indeed as different as you wish, to that prevailing on Earth today.

Now nearing completion, *Civilization 1200* is being enhanced to take advantage of the superior capabilities of the new AGA chip set. The ability to install onto hard drive adds enormously to the playability, leaving you to devote all your concentration to your strategy without the distraction of disk swapping.

You may already own a copy of *Civilization* which no doubt works fine on your new machine, so why are they bothering to enhance it at all? The main improvement in the new version will, of course, be in the much more detailed graphics; game play is unchanged and as absorbing as ever. The presence of 2Mb of chip RAM is, if you'll pardon the expression, a godsend; the previous version was notoriously greedy for RAM. Unlike arcade games, *Civilization* runs via the CPU, so the presence of the speedier 68020 chip is also of great benefit.

Naturally if you're a diehard beat 'em up addict, it's doubtful whether anything I can say will convince you of the sheer mind-blowing scope of this game; however if you're prepared to have a go I'm willing to bet you will find it both addictive and informative. The long-term interest of

the game cannot be overstated; whilst it can of course be 'completed', if you started from scratch and changed only a few of your tactics along the way, a completely different scenario would emerge, forcing you to reconsider other resulting actions and changing the whole 'feel' of your world. At almost every step you can't help but wonder 'O.K., but what if I'd done it THIS way instead? Well, perhaps I'll try that next time...'

If you want a game that involves the use of your brain and not just your joystick, do yourself a favour and check out *Civilization*.

Contact: Microprose, Unit 1, Hampton Road Industrial Estate, Tetbury, Glos, GL8 8LD. Tel: 0666 504326. Price: £34.99.

UTILITIES

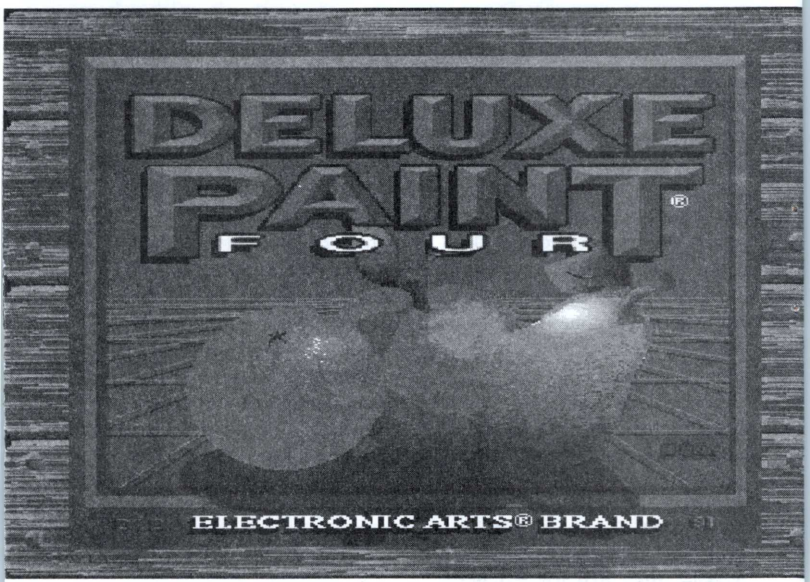
For those of you who want to explore the world of A1200 enhanced utilities, here's a glimpse at what's available:

DELUXE PAINT IV AGA

There can be few Amiga owners who are unfamiliar with *Deluxe Paint* from Electronic Arts; one version or another has been a feature of Amiga bundles from the earliest days of the machine. Now the latest incarnation, *Deluxe Paint IV AGA*, has arrived, ready to take advantage of all the new graphics modes available on the A1200. If you've been feeling limited by only being able to use up to 64 colours on screen from a possible palette of 4096, how does 256 colours from a possible 16 million sound? And that's only in standard mode – using the new Ham8 display, prepare to be knocked out by over 262,000 colours on-screen, with a resolution of up to 1280 x 512, giving an almost photo-realistic picture.

Unfortunately, manipulating all those lovely colours takes time. Rather a lot of it. If you were expecting the new chip set to produce incredible graphics at blistering speed, this is bound to be disappointing news; as most of the operations are maths-intensive perhaps a maths co-processor would help? Nope, afraid not. *DPaint* won't take advantage of it. What a pity. Still, that small gripe aside, what a program!

Control of the painting tools is virtually unchanged, so users of



previous versions will have no difficulties when they upgrade – and yes, I think you'll want to! To use this version, you'll need two drives, one of which can be a hard drive. If you use a multi-sync monitor, the higher resolutions are amazing, and incidentally the program will automatically adapt itself to use the available monitor by checking your Devs/Monitors drawer.

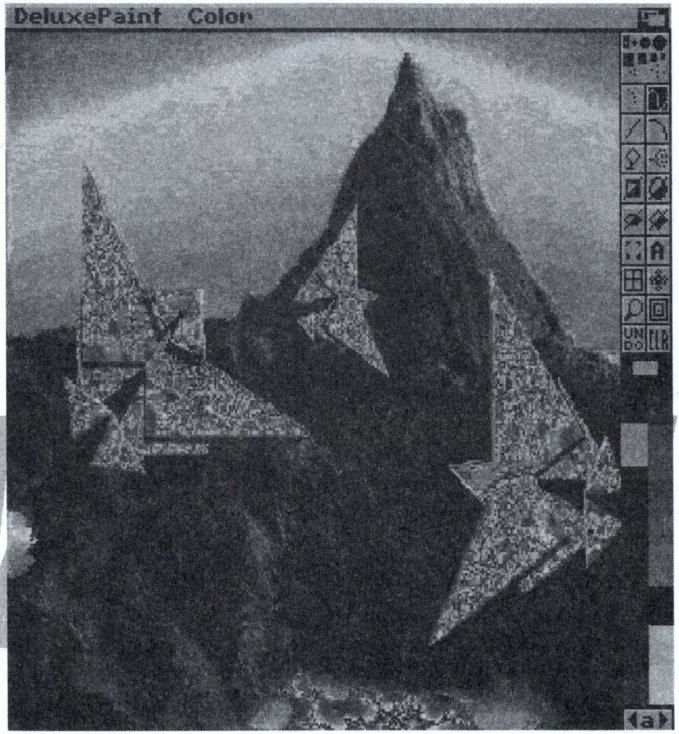
Support for pressure-sensitive graphics tablets is included, and these are certainly much more intuitive to use for painting than the mouse, if you're lucky enough to own one.

DPaint AGA can use HAM8, a new version of HAM that uses eight bit-planes, is far better than the old one, with much less colour fringing. Although not a 24-bit package, *DPaint* will load 24-bit IFF images, automatically converting them to a mode it can handle. Even after this treatment they can look pretty impressive!

Animation has been a popular feature of *DPaint* ever since version 3, and of course this is still supported, though again, the playback speed is a little disappointing.

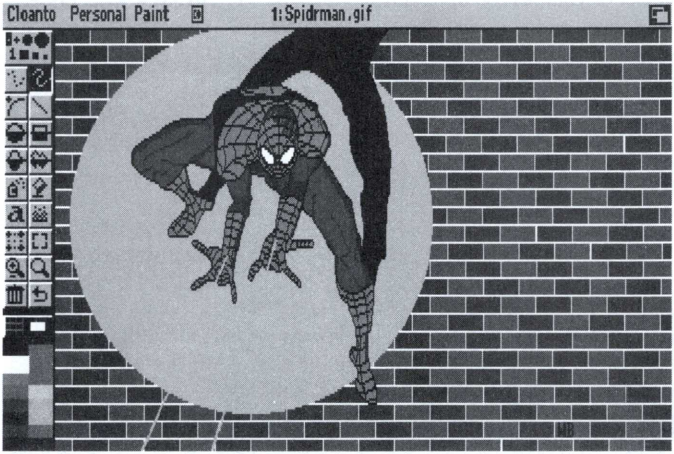
If you want to use the graphics power of your A1200 to its full advantage, and you can tolerate the rather ponderous pace that it works at, *DPaint IV AGA* is the familiar and trusted face that you have been searching for all this time.

Contact: Electronic Arts, 90 Heron Drive, Langley, Berkshire SL3 8XP. Tel: 0753 549442. Price: £99.99.



PERSONAL PAINT

Joining the Amiga scene is a new rival for *Deluxe Paint – Personal Paint* from Cloanto in Italy. It would seem to be a brave move, attempting to challenge such a well-loved program; however, although there is inevitably a substantial overlap in the features of the two programs, there are also worthwhile differences between them.



The tools are roughly similar in appearance and use to *DPaint*. There are some exceptions, a few of which are merely cosmetic – for instance the tool bar pops up on the left of the screen rather than the right, and the icons are slightly different in appearance. Some of the differences, however, are more fundamental; for example, *DPaint*'s symmetry option is not supported, replaced instead by a range of powerful filter options. The greatest surprise is that there is no support for animation.

All of the 1200's display modes except HAM and HAM8 can be used. These omissions are particularly puzzling given the excellent results that these modes can yield. *Personal Paint* handles text much more effectively than *DPaint* – at last you have the

ability to justify or centre text. Multiple brushes are supported, and up to nine brushes held in memory at a time.

One feature that I found particularly useful was the fact that the spare screen doesn't necessarily have to share the same resolution and number of colours as the main one.

Alien file formats are supported, with the ability to import GIF and PCX images as well as the Amiga standard IFF files.

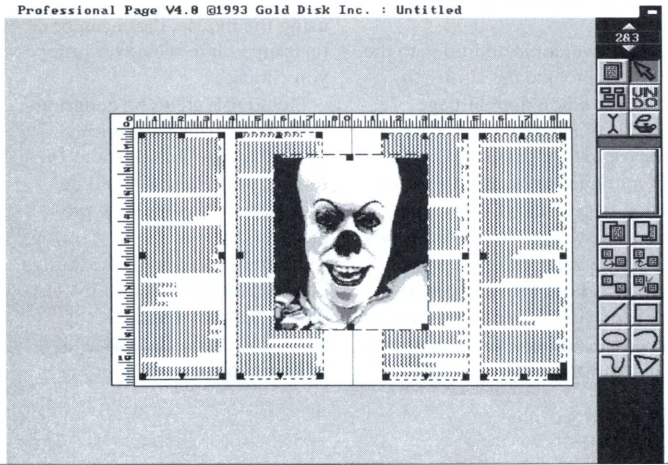
There are a whole range of image processing options available, including blurs, tints, randomise, edge detect, various dither patterns, etc, all of which produce interesting results, although naturally some of these will be more useful to you than others.

Cloanto have made an excellent attempt to usurp *Deluxe Paint*, and I'm still not convinced that they haven't succeeded. Those with deep pockets could do worse than to get both.

Contact: Micropace, Unit 10, Perth Trading Estate, Perth Avenue, Slough, Berkshire, SL1 4XX. Tel: 0753 551888. Price: £59.99.

PRO PAGE 4

For some time *Professional Page* has been a favourite DTP program amongst Amiga owners. Vying for popularity with *PageStream*, *Pro Page* has found favour with many professional



users as well as with home DTP enthusiasts.

The latest release, version 4, is now available. Many improvements have been made; not least among these is the addition of full support for the AGA chip set, so if you own a 1200 this is the version to go for. You will, however, need a hard drive and at least 2Mb of memory to use this and future issues of the program.

Pro Page can be run in any of the A1200's display modes, up to and including SuperHiRes – 256 colours on a superb 1,280 x 512 resolution screen. This rivals even top-of-the-range professional DTP systems on computers such as the Mac. The nicest surprise is that all this seems to be accomplished with no reduction in speed.

Other welcome additions to the program include the ability to view and edit a double-page spread. When laying out a magazine (or even a small leaflet) it's often helpful to be able to see two facing pages, and if you do need this facility, *Pro Page* is currently the only Amiga program to provide it. A Font Preview option has been added, and together with the new Kerning Pair adjustment, font control is now even better than before. Graphics handling too is improved, with the ability to import PICT, GIF, and TIFF format images. There's even a module to import Adobe Illustrator clips. Images are imported using as many colours as necessary (up to 256) and the program will do its best to show files with more colours than this as realistically as possible.

Perhaps the most novel addition to the program is the 'Stick-on Note' which you can now use within a document! The notes, whilst appearing on the screen, do not print out – the perfect way to give yourself reminders.

If you have plenty of memory, the new page-sorting feature will be of interest. A thumbnail representation of each page is shown; using the mouse, these can be rearranged into whatever order you choose.

Gold Disk are to be congratulated on their latest offering. More than just an update to *Pro Page 3*, *Pro Page 4* could be regarded as a whole new program, and one of the best serious software packages for the Amiga.

Contact: Silica Systems, 1-4 The Mews, Hatherly Road, Sidcup, Kent, DA14 4DS. Tel: 081 309 1111. Price: £117.49.

VISTA PRO 3

All you budding Michael Palins out there will be pleased to learn that the latest release of *Vista Pro* now supports the full range of display modes available on the A1200.

In practice this means that the views from many parts of the world available in the .DEM file format can now be seen in their pseudo16-bit HAM8 glory – providing, that is, you have an abundance of memory, and even more importantly, patience.

Vista Pro is a fractal landscape generator, capable of producing stunning scenes containing dramatic geological formations; rivers, valleys, lakes and mountains can all be constructed by your Amiga and viewed from your chosen vantage point by simply moving the 'camera' position to the place in the picture where you want to stand, and directing your vision towards any other point.

Many sites in the real world, and indeed on other planets, have been painstakingly converted into a format that *Vista* can utilise, and for those of you who think that real life is for wimps, *Vista Pro* will also produce views of places that never have existed, by using fractal-mathematics.

Animated trips through your environment can be made, though as these use the unique VANIM format they can only be viewed from within *Vista Pro*.

Vista Pro 3 is an outstandingly peripheral-friendly program that will make the very best use of any enhancements you may have fitted to your Amiga. Though it will run from floppy disk, a hard drive is really a necessity, as is plenty of memory if you want to produce the massive files generated by the program when all the user-configurable parameters are set to maximum. Of course, you can render any picture in a much blockier form first, just to see if it's worth your while to continue with it; be warned, though, that if you do decide to use maximum resolution the chances are that you could jump on a plane, fly off, take a photo of the real thing and be home before it's finished rendering! (Well, O.K., perhaps not to Mars, but you get my drift...) Accelerators and maths co-pros are worth their weight in gold when using *Vista Pro*.

Just about every natural feature you can think of is under your control; stars, clouds, haze, four different types of vegetation, (including, for the first time, the choice of rendering your trees in 2D or 3D), snow, lakes, rivers, etc., and also some man-made features such as roads

and buildings. There are so many different options, in fact, that the program can look a bit daunting; however the well-written manual will tell you all you need to know.

Surely it's only a matter of time before you'll be able to sprinkle your scenes with fractal litter and the odd squashed fractal hedgehog to make it even more realistic – until then you'll have to put up with every landscape looking as pristine as if it had just been created; which often, in a very real sense, it has.

Contact: DMI, Unit 3, Poyle 14, Newlands Road, Colnbrook, Slough SL3 0DX. Tel: 0753 686000. Price: £69.99.

WORDWORTH v2.0 AGA

The newest version of *Wordworth*, available to existing owners as an upgrade from Digita International for a nominal charge of £10, has been enhanced to get the most out of your A1200. The upgrade will install painlessly over the top of your current copy, automatically overwriting all files except the user dictionary.

Graphics handling has always been one of *Wordworth*'s strong points, and this version continues to impress. Various file formats are supported, including all IFF formats, *Pro Draw* clip-art, Encapsulated PostScript, PCX and BMP. All display modes available on the A1200 can be used, enabling you to use pictures in up to 256 colours, or even pictures created in HAM8. The palette sharing ability means that you can even load several 16 or 32 colour pictures, all in their original colours, all at the same time; however, as with all things in life, a price has to be paid – and in this case the price is speed. With this in mind, you might prefer to use one of the less colourful options, ie. 16, 32, or 128 colours, to speed up your work. Adding extra RAM, preferably 32-bit, will improve your speed even further.

Wordworth's printer support has always been second to none; any internal font available to your printer can be used, and any bitmap font, Agfa, Compugraphic fonts, and Adobe Type 1 fonts such as those used in standard PostScript laser printers can be easily selected from *Wordworth*'s font requestor. You may use as many fonts as you wish in a document. Scalable fonts will pro-

duce the best results; however as they are printed as graphics the production of a page can be a painfully slow process. For maximum speed, you should use your printer's internal fonts.

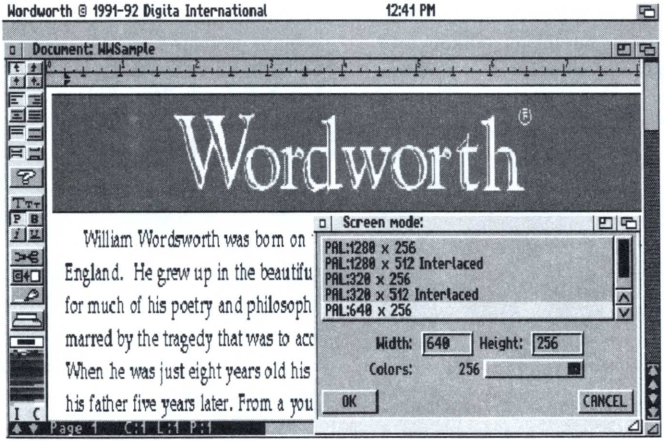
A range of professional features is supported by *Wordworth*, including Footnotes and Index creation; however as Workbench 3 no longer supports the Speech facility, this option has been removed. An excellent British thesaurus and spell checking dictionary are included. Another useful trick is the way it handles foreign characters. This can be cumbersome on some word processors, requiring various odd key combinations; *Wordworth* has a menu option which shows all the punctuation marks and accented letters, from which you simply select the one you want with the mouse.

All in all, the latest version of *Wordworth* is a fine program that continues Digita's tradition of excellence.

Contact: Digita International, Black Horse House, Exmouth, EX8 1JL. Tel: 0395 270273. Price: £129.99.

PAGESETTER 3

Whilst the well-heeled are able to afford top-of-the-range DTP programs like *Professional Page* and *PageStream*, the less well-off or the more casual user may


Wordworth @ 1991-92 Digita International
12:41 PM
Document: WWSample
Wordworth
William Wordsworth was born on
England. He grew up in the beautifu
for much of his poetry and philosoph
marred by the tragedy that was to acc
When he was just eight years old his
his father five years later. From a you
Page 1 C:1 L:1 P:1
Screen mode:
PAL:1280 x 256
PAL:1280 x 512 Interlaced
PAL:320 x 256
PAL:320 x 512 Interlaced
PAL:640 x 256
Width: 640 Height: 256
Colors: 256
OK
CANCEL

well prefer an entry-level package. *PageSetter 3* will fill their requirements admirably.

Released by Gold Disk, the producers of the highly successful if expensive *Pro Page*, *PageSetter* obviously has an excellent pedigree, and should not be seen as a cheap and nasty substitute for the real thing; it is in fact a very worthwhile program in its own right.

PageSetter 3 takes advantage of the AGA chip set to enable you to produce full 256 colour documents – even HAM8 and 24-bit graphics can be imported and automatically rendered into 256 colours, and this is handled speedily.

Graphics can only be imported in either IFF or *Pro Draw* clip formats but this is unlikely to cause problems unless you regularly need to exchange files with other computers.

Custom pages can be created by simply choosing the page size in either centimetres or inches, up to 17 inches square; or you may choose from the standard A3, A4 and A5 sizes by clicking on them in the requester gadget.

Text filters for several popular word processors are provided, and you can of course import standard ASCII as well as the PC variation, should you need to. Printing facilities are surprisingly good for such an inexpensive program; and even full colour PostScript printing is supported by the package.

Although it's not really up to the job of designing lots of full-colour magazine pages, the program is more than adequate for the smaller jobs that most home DTP enthusiasts will be likely to want to produce.

Contact: Silica Systems, 1-4 The Mews, Hatherly Road, Sidcup, Kent, DA14 4DS. Tel: 081 309 1111. Price: £49.95.

SOFT

VIDI 12 AGA

Flying the flag for Britain, Rombo have become well known for their high quality, low cost digitisers.

Retailing at under £100, the standard *Vidi 12* package was unrivalled in terms of its power-to-price ratio.

The new version supports all AGA screen modes. *Vidi 12* consists of a small box that plugs into the parallel port of your computer. This box is able to accept either an RF (phone-type) plug or an S-VHS DIn adaptor.

With the box connected, and the software running, it's possible to digitise full-colour images taken from a video camera or recorder in under a second.

Once you have captured them, these images can be strung together using its excellent screen handler which is called Carousel. These images can then be animated if required.

If the static image is particularly important to you, you'll definitely appreciate the program's image processing options. These include options such as blur, quantise, solarise, negative and sharpen to name but a few.

With care, the old program could capture images that were almost photographic in quality. Now that the new AGA version is capable of using 256,000 colours in resolutions as high as 512x1280, it's hard NOT to digitise photographic quality images.

Contact: Rombo, Baird Road, Livingstone, Scotland, EH54 7AZ. Tel: 0506 414631. Price: £99.95.

WARE

THE ULTIMATE LIST

With all the rumours about incompatible software, we thought that we'd present you with our own list so that you could see whether or not buying an A1200 means that you'll have to consign your valued utilities and favourite games to the bin.

THE ONES THAT WORK

A320 Airbus • AV8B Harrier Assault • Abandoned Places • Agony • Air Support • Alcatraz • Alien Breed (All versions) • Anarchy • Another World • APB • Apidya • Aquatic Games • Aquaventura • Archer Maclean's Pool Archipelagos • Armourgeddon • Ashes of the Empire • Assassin • Audiomaster 4 • Back to the Future 3 • Bad Company • Barbarian 2 (Psygnosis) • Balance of Power • Batman the Movie • Battle Chess • Battle Isle • Battle Valley • Better Maths • Birds of Prey • Black Crypt • Blue Max • Blues Brothers • Budokan • Captain Dynamo • Castle Master • Celtic Legends • Chaos Strikes Back • Chess Master 2100 • Civilization (original

• Combo Racer • Cool Croc Twins • Cool World • Count Duckula 2 • Covert Action • Crack Down • Crystal Kingdom Dizzy • Curse of Enchantia • Darkseed • Deluxe Music Construction Set • Deluxe Strip Poker 2 • D/Generation • Directory Opus • Discovery in the Steps of Columbus • Dizzy's Excellent Adventure • Dizzy Panic • Dizzy Prince of the Yolk Folk • Dogs of War • Double Dragon 3 • Dragon Ninja • Dungeon Master • Dynablaster • Elvira • Epic • European Rampage WWF2 • European Super League • Eye of the Beholder • Eye of the Beholder 2 • F15 Strike Eagle 2 • F19 Stealth Fighter • FA18 Interceptor • Falcon • Ferrari Formula 1 • Flight of the Intruder • Footballer of the Year • Forgotten Worlds • Fun School 2 • Gauntlet 2 • Gold Rush • Grid Iron • Hagar • Harlequin • Head Over Heels • Hitchhiker's Guide to the Galaxy • Hook • Horror Zombies from the Crypt • IK+ • Indiana Jones and the Fate of Atlantis – Arcade • Indiana Jones and the Last Crusade – Adventure • Italy 1990 • Jack

Nicklaus' Great 18 • Jack Nicklaus' Unlimited • Jahangir Khan Squash • Kick Off 2 • Knightmare • Kwik Snax • Last Battle • Leander • Lethal Weapon • Lure of the Temptress • M1 Tank Platoon • Magic Maths • Magicland Dizzy • Microprose Formula 1 Grand Prix • Mig 29 Super Fulcrum • Monkey Island 2 • Monty Python • Myth • Nicky Boom • Nigel Mansell Championship • No Second Prize • 1000cc Turbo 1000 Miglia • Operation Thunderbolt • Panza Kick Boxing • Paperboy • Paperboy 2 • Parasol Stars • Pictionary • Pinball Fantasies • Pit Fighter • Plutos • Populous 2 • Postman Pat • Postman Pat 3 • Premier Manager • Prince of Persia • Pro Boxing Sim • Professional Draw 3.0 • Prospector in the Mines of Xor • Psyborg • Push Over • Putty • Quantox • Quattro Fighters • Quest & Glory • R-Type • Railroad Tycoon • Rainbow Islands • Rambo 3 • Raving Mad • Red Lightning • Red Zone • Road Blasters • Robin Hood • Robocod • Robocop 2 • Rodland • RVF Honda • 688 Attack Sub • SAS Combat • Shoot 'Em Up

Construction Kit • Samurai Santa's Xmas Caper • Savage • Sensible Soccer 92/3 • Seymour Goes to Hollywood • Shadow of the Beast 3 • Shufflepuck Cafe • Shuttle • Silent Service 2 • Sinbad – Throne of the Falcon • Sim Ant • Sky High • Stuntman • Slightly Magic • Sly Spy Secret Agent • Soccer Pinball • Space Ace 2 • Space Quest 1 • Space Station • Special Forces • Spellbound • Spellbound Dizzy • Spike in Transylvania • Starglider • Stargoose • Steel • Steg the Slug • Steve Davis Snooker Strike Fleet Striker Super All Stars Super Tetris Tag Team Wrestling • Tennis Cup • Test Drive • Thomas the Tank Engine Thomas the Tank Engine's Fun with Words • Thunderblade • Thunderhawk • Thunderstrike • Total Recall • Treasure Island Dizzy • Troddlers • True Print 24 • Turrican • Viz • Warzone • Ween • Windwalker • Wing Commander • Wiz Ball • Wiz Kid • Word Perfect 4.12 • World Class Leaderboard • World Class Rugby • World Cricket • World Series Cricket

DISABLE CACHE AND THESE WILL WORK

BSS Jane Seymour • Blood Money • Bloodwych • Captain Blood • Cave Mania • Deathtrap • Dizzy Collection • Doodlebug • E-Motion • Flimbo's Quest • Fuzzball • Games España 92 • Go for Gold • Guardian Angel • Jaguar XJ220 • James Pond • Jetset Willy 2 • Kid Gloves • Lemmings • Little Puff • Mercs • Navy Moves • Oh No More Lemmings • Powerplay • Protext 5 • Puzznic • Steel Empire • Zool (original version)

AND NOW THE BAD NEWS...

Adventures of Robin Hood • Airball • Airborne Ranger • Altered Beast • Artura • Axel's Magic Hammer • Badlands • Barbarian 2 (Palace) • Battle Chess 2 • Battle Ships • Beach Volley • Bubble Bobble • Cadaver California Games • Carl Lewis Challenge • Carrier Command • Chase HQ • Chicago 90 • Chip's Challenge • Chuckie Egg • Chuckie Egg 2 • Continental Circus • Conqueror • Crazy Cars • Cyberball • Damocles • Demolition Disc • Double Dragon 2 • Dragons of Flame • Drum Studio • Dynasty Wars • Electronic Pool • Emlyn Hughes • Enforcer • Escape from the Planet of the Robot Monsters • F16 Combat Pilot Fighter Mission • Fighting Soccer • Final Command • Final Flight •

Fire Force • Gary Lineker's Hotshots • Gauntlet 3 • Gemini Wing • Global Effect • Goldrunner 2 • Grand Monster Slam • Gravity • Hard Ball • Hard Drivin' • Heimdall • Hero Quest • Heroes of the Lance • Highway Patrol 2 • Humans • Ice Hockey • Impossamole • Indiana Jones and the Last Crusade – Arcade Game • International Soccer • Italia 90 • Jimmy White's Snooker • Kyrandia • Last Ninja 2 • Leisure Suite Larry 5 • Lotus 1 • Lotus 2 • Manchester United • Mean 18 • Mega Twins • Midnight Resistance • Midwinter • Midwinter 2 – Flames of Freedom • Mig 29 (Codemasters) • Moonwalker • Mousetrap • Narc • New Zealand Story • Nightbreed – The Movie • Ninja Warriors • Nitro Boost • Outrun • Outrun Europa • Pang • Paradroid 90 • Passing Shot • Phantasm • Popeye 2 • Populous • Power Drift • Predator 2 • Pro Flight • Protector • Quadralien • Quest of Agravain • Rebellion • Robin Smith Cricket • Robosport • Robozone • SCI – Chase HQ 2 • Seconds Out Boxing • Shadow Sorceror • Shinobi • Simpsons – Bart Vs the Space Mutants • Skid • Snow Strike • Sorceror • Sooty and Sweep's Fun with Numbers • Space Crusade • Spidertronic • Starblaze • Street Fighter • Street Fighter 2 • Strider • Strip Poker • Super Cars • Super Grand Prix • Super Monaco GP •

Super Off Road • Super Ski • Super Space Invaders • Suspicious Cargo • Swap • Switchblade 2 • Swiv • 3D Pool • Test Drive 2 • Thai Boxing • Top Banana • Tower of Babel • Turbo Trax • Tusker • Twin Turbos • Ultimate Golf • Voyager • WWF • Wipe Out • World Class Boxing • X-Out • Z-Out • Zak McCraken

WORDS OF WISDOM

If a game doesn't seem to load, there are a number of start-up options that you can alter to try to rectify the situation. To access these options, turn the computer on whilst holding down both mouse buttons. The Early Startup Control screen will appear containing three buttons which lead to further sub-menus.

The first one is called Boot Options and it enables you to specify which devices will be active when the computer attempts to boot a program. It also controls CPU caches. A lot of programs don't like CPU caches, so click the button labelled 'Disable CPU caches'. Whilst you're here, you might as well disable CC0 at the same time. CC0 is the PCMCIA card slot and although disabling it is unlikely to help, it sometimes makes a difference. When you've made the changes, click 'Use' to return to the main menu, then click 'Boot' to try and load whatever wouldn't load previously.

If this still doesn't work, return to Startup Control (reset the Amiga whilst holding both mouse buttons) and click the Display Options button. This lets you specify the type of display chips that your software requires. Try loading with 'Enhanced' selected and if this doesn't work, try the 'Original' option. If this doesn't work, you can assume that your program won't load at all.

THE FUTURE

So what's in store for the A1200 in the future? Here's what our crystal ball tells us...

Millennium have already announced seven A1200 specific games. The first two, which should be available as you read this, are revamped versions of *James Pond* and *Robocod*. They will apparently be much more colourful, and will include extra levels and enhanced game play.

Considering the phenomenal success of the first two James Pond games, it comes as no surprise to learn that Millennium are planning to bring *James Pond 3* (*Operation Starfi5h*) to a screen near you. Breaking with tradition, the game will have a two-player option. Totally in keeping with tradition is Millennium's terrible sense of word play as they introduce a new character called Finnius Frog! The other four games have only been given working titles at the moment. They are *Diggers*, *Flag*, *Dino Worlds* and *Beastball*.

Team 17 have already declared that they will be producing an A1200 specific version of *Alien Breed 2*. Considering what a good job they did with the A500 version, I can barely wait.

From the zimmer-assisted wilds of Bournemouth, Vivid Software are planning to launch their A1200 assault with *Mr Gurk and His Amazing 16 Million Coloured Quest*. Hmm, snappy title boys! It refers to the 1200's impressive colour palette, so we should be in for a real graphics treat.

On the utility front, *Scala*, the award-winning presentation package from Scala UK has just received a face-lift so that it can use the full AGA chip set. It is already being used world-wide for multimedia applications, and this upgrade looks set to confirm its position of eminence at the top of the pile.

Although Electronic Arts were quick to release an AGA version of *DPaint*, it seems that they're not satisfied to rest on their laurels. Recently the program's illustrious authoress was to be seen taking suggestions from journalists about the contents of *DPaint 5*! Although the final specs have yet to be agreed upon, it seems certain that the

program will include image processing options which weren't feasible on the older versions.

AND FINALLY...

That's about it for our look at the Amiga 1200. With over 100,000 machines out on the streets, and millions of pounds worth of development going on even as you read this, the machine is assured a bright future.

Needless to say, we'll be seeing more and more games that use its impressive palette and upgraded graphics manipulation routines. Taking into consideration the faster processor and 32-bit architecture I confidently expect to see games that console owners can only drool over. For too long the Amiga has had to stand by whilst the consoles, PCs and Macs just kept moving farther and farther ahead in the 'ultimate computer' race. Now the Amiga's back with a vengeance.

In terms of utilities, expect to see far more professional and semi-professional video software out there. With the computer's new high resolutions, it's absolutely ideal for budget video titling. Add to that its pseudo 16-bit palette courtesy of HAM8 and the machine becomes a serious contender in the broadcast animation and ray-tracing arenas too. Amiga graphics already appear on television with predictable regularity. The graphics capabilities make it even more attractive as the ultimate solution for TV production on a budget. The only trouble is, the graphics are so good you may not be able to recognise them any more!

Although Atari continue to dominate the professional MIDI markets, the Amiga 1200's faster processor and thriving software development community seems likely to finally make serious inroads into the sales of Cubase and the like. This is already supported by the increasing growth of Amiga-assisted singles in the charts. It seems likely that Commodore will eventually do for the Amiga's sound capabilities what it's already done for its graphics. At the very least, this would seem to indicate that the machine will go 16-bit, and logic says that doubling the number of sound channels would be a good move too. As for the addition of a digital signal processor, this more than anything else seems to be wanted, at least by the programmers. Such a chip would not only enhance the computer's musical abilities but would significantly improve all other areas of its operation too.

In the end of course, Commodore will go their own sweet way, but at least with the Amiga 1200 they've demonstrated that they know exactly what the market wants, and how to respond to it!

Are you thinking of buying an A1200? Or have you just bought one and want to know more about its internal workings? **Then you've come to the right place!** This free 48-page guide covers just about everything you could possibly want to know about the A1200 – and more besides! **It's packed with essential information and even comes with the definitive guide to A1200-compatible software and hardware.** So what are you waiting for? Dive in and discover the joys of 32-bit home computing with the state-of-the-art A1200.

emap images

A AMIGA publication